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## A CASE OF BIFURCATED FOOT WITH ELEVEN TOES.<sup>1</sup>

BY GEORGE J. BULL, M. D., OF WORCESTER.

THE following case of congenital malformation of the foot and leg derives additional interest from its extreme rarity. It furnishes an example of the anomaly known in Geoffroy Saint-Hilaire's classification as "bifurcated hand or foot," a deformity not uncommon in the hooved mammalia, but so rare in man that Saint-Hilaire never found mention of a single well-authenticated case.<sup>2</sup>

A girl was born in Worcester on the 5th of May, 1875, healthy and apparently well formed, except in the left inferior extremity. Her left foot presents the heretofore unheard-of number of eleven toes, and in its general appearance may be compared to a double or cloven foot. It has only one heel, but in front consists of two parts, which we may call the anterior and posterior feet. The anterior presents the great toe with four smaller toes, naturally placed and of normal proportions, but is twisted downwards and inwards in the position of extreme talipes equino-varus. Several pits or depressions over the tarsus mark the position of interspaces between the bones, and show the extent of the inversion, which is further shown by the fact of the inner border of the foot pressing against the heel. Continuous with the outer edge of the anterior foot, and curving beneath it, is the posterior part, looking not unlike a second foot, and furnished with six well-formed, small toes, situated directly below the other five. The plantar surfaces of the two sets of digits face each other, and are separated by a groove, which, beginning between the little toe of the anterior foot and the adjoining one of the supernumerary set, grows broader and deeper as it proceeds in-



<sup>1</sup> Extract from a paper read before the Worcester District Medical Society, July 14, 1875.

<sup>2</sup> *Histoire des Anomalies*, 1832, i. 695.

wards, and, winding around the metatarsal bone of the great toe, is lost in the furrow between the heel and the inner border of the anterior foot. The two feet are thus quite distinct at the phalanges, and their plantar surfaces are more or less free, that of the anterior foot being visible as far back as the first metatarsal bone, while that of the posterior foot is almost all to be seen, and terminates so naturally on the heel that it is difficult to say to which foot the heel more properly belongs. The eleven toes are perfect in form; none of them are webbed. The great toe and four smaller toes of the anterior foot are normally proportioned; the little toe is the exact image of the first toe of the supernumerary set which adjoins it; the second is the longest of the six, but does not at all resemble a great toe; the third and fourth are equal in length, the fifth and sixth are shorter, as are the outermost toes in the normal foot. The six extra toes remain almost without motion when the normal toes are flexed and extended, but they appear to have distinct metatarsal bones, and perhaps two or more bones of their own in the tarsus. Passing upwards we find the left leg and thigh much thicker than the right, but in length the two sides are equal. The difference in size may be seen in the following measurements: —

	Right Side.	Left (abnormal).
The circumference of the upper part of the thigh measures	7½ inches.	9½ inches.
" " " " thigh just above the knee "	6½ "	7½ "
" " " " knee "	5½ "	6½ "
" " " " leg immediately below knee measures	5½ "	5½ "

There does not appear to be any unusual development of bone, but there is evident muscular hypertrophy. When the knee is partly flexed a rigid cord or tendon may be felt in the position of the outer hamstring, passing back of the knee, where it stands out prominently beneath the skin, and is continued downwards behind the fibula almost as low as the *os calcis*. The left *labium majus* has been twice as large as the right ever since birth. During the mother's pregnancy nothing remarkable happened, nor has anything been discovered to account for this strange malformation. I would, however, briefly call attention to the fact of the occurrence of this double deformity on the left side, the right being normal. Dr. Little<sup>1</sup> has remarked that congenital club-foot, as well as the deformity occurring after birth from disease of the nervous system, attains oftener a higher grade on the left than on the right side. I have not had an opportunity of verifying this statement, which refers to club-foot only, but I have observed a remarkable tendency in polydactylysm to affect the left side more than the right. The malformation is altogether confined to the left side in the case above reported, and in an analogous case of bifurcated or double hand described in the forty-sixth volume of the *Medico-Chirurgical Transactions*, page 29. We find the same peculiarity in a case<sup>2</sup> in which the left foot presented

<sup>1</sup> *Holmes's System of Surgery*, 1862, iii. 567.

<sup>2</sup> *Transactions of the Pathological Society of London*, ix. 427.

nine toes, but no deformity existed in the other. In the *London Medical Gazette*<sup>1</sup> a supernumerary toe is mentioned as occurring on the left foot of a boy, other members of whose family were deformed in like manner. Mr. Sedgwick reports<sup>2</sup> the case of a girl who had a complete supernumerary finger attached to the outer side of the first phalangeal joint of the left little finger; the child's father, paternal grandmother, and paternal aunt had precisely the same deformity. Another case<sup>3</sup> related by Mr. Sedgwick consisted of double last phalanx on the left thumb of a boy whose maternal grandfather's great-nephew had exactly the same deformity. We find mention<sup>4</sup> also of a boy presenting six toes on the right foot and seven on the left, his hands being similarly malformed. His mother, sister, maternal uncle, and maternal grandfather had the same number of toes and fingers. In Amsterdam a monster, drowned by its parents, had eight toes on the right foot and nine on the left, besides many other malformations. An extended search among the records has discovered many cases of supernumerary digits similar to those already cited, but only a single case<sup>5</sup> where the digits were more numerous on the right side than on the left. I infer, therefore, that polydactylism generally affects the left side in preference to the right.

Mr. Adams has remarked<sup>6</sup> that occasionally we observe an excess or deficiency in the number of toes associated with congenital varus. Tamplin<sup>7</sup> has made a similar remark, and has given an illustration of a case of double talipes varus in which the right foot presented a bud-like projection on the little toe, while the left had six well-developed toes. We observe the association of congenital varus and supernumerary toes in the case of bifurcated or cloven foot, and we now find a further relationship between these deformities, inasmuch as they each attain oftener a higher grade on the left than on the right side. Whatever may be the true explanation of these facts, they show an especial tendency to deformity on the left side of the body, the side known to be the weaker one in the great majority of men.

<sup>1</sup> December 15, 1832, page 361.

<sup>2</sup> British and Foreign Medico-Chirurgical Review, April, 1863, page 463.

<sup>3</sup> Op. cit., page 462.

<sup>4</sup> London Medical Gazette, April 12, 1834.

<sup>5</sup> Broadhurst on Deformities, 1871, page 57.

<sup>6</sup> On Club-Foot, page 210.

<sup>7</sup> On Deformities, page 69.

MECHANICAL APPLIANCES IN UTERINE SURGERY.<sup>1</sup>

BY WILLIAM H. BAKER, M. D., OF BOSTON.

In a previous article we considered and classified the causes of misplacement of the uterus, defined the terms mechanical appliances, and described the structure, form, and principle of application of the most important.

We are now prepared to ask (1) in what cases they are beneficial; (2) when they may be dispensed with; and (3) when they are positively injurious. These inquiries can be more satisfactorily answered by citing cases from our record-books in illustration of the particular class under consideration.

## I. CASES IN WHICH MECHANICAL APPLIANCES ARE BENEFICIAL OR EVEN INDISPENSABLE.

CASE I. Mrs. B. had had six abortions, four of them having taken place since the birth of her last child; and when she came under my care she was threatened with a recurrence of the same accident.

On examination, the uterus was found completely retroverted and flexed, enlarged as in the second month of pregnancy, and exceedingly sensitive, with a slight discharge of blood from the os uteri. The patient was put to bed, and kept under the influence of opium for five days, at the end of which time the uterus was so tolerant that it could be replaced without serious danger of abortion. This was done by bi-manual manipulation, the patient lying upon the back. A Hodge retroversion closed pessary was introduced.

The patient derived great comfort from the appliance, and three months afterwards, the uterus having risen out of the pelvis and all danger of a recurrence of the accident having passed, the pessary was removed, and she went on to the full term of her pregnancy.

In this case the cause of the previous abortions had undoubtedly been the malposition of the uterus; wedged into the hollow of the sacrum, as it enlarged the tendency to abortion became greater and greater. The patient being very anxious to have another child, she having but one living, it was a matter of great importance to her whether she could complete her term of pregnancy, or whether she must abort as on former occasions. If, then, we had replaced the uterus and had not used any mechanical appliance to retain it in position, it would almost certainly have returned to its retroverted state, and a recurrence of the threatened accident would have taken place. To remain quiet in bed until the uterus should reach that size which would enable it to rise out of the pelvis had been repeatedly tried in

<sup>1</sup> Concluded from page 279.

previous pregnancies without benefit ; but on the contrary, the general health suffered so much by the confinement that it was worse than useless to attempt its repetition. Our object was only to be gained by exactly the treatment used ; and the result in overcoming the threatened abortion, and carrying the patient over the time when its recurrence from a similar cause was past, proved the advantage of the appliance.

CASE II. Mrs. M., thirty-one years of age, had suffered more or less for ten years from dragging pains in both groins, great bearing-down, and backache, which had gradually but continuously increased, until at the time when I was first called to see her, July 2, 1874, her life was made perfectly miserable by the intensity of the above symptoms, even perfect quietude not giving her relief. The bowels were constipated, and the desire for micturition was very frequent. The patient was also made very unhappy by the fact that she was not able to suffer the slightest approach of her husband, sexual intercourse causing such severe pain.

Upon examination the cervix uteri was found crowded well forward against the symphysis pubis, by a sub-serous fibroid the size of the fist. Wedged into the hollow of the sacrum and nearly filling the excavation of the pelvis, this tumor formed with the uterus an immovable and highly sensitive mass. The uterus, somewhat retroflexed, admitted the uterine probe three and a half inches.

The treatment was first directed to relieving the sensibility of this neoplasm by hot vaginal injections and the application of the tincture of iodine to the fornix of the vagina. By these means, at the end of two and one half weeks the tenderness was so far removed that attempts were made on alternate days to gradually work the fibroid up out of the excavation of the pelvis, past the promontory of the sacrum, and above the superior strait. This was a rather tedious undertaking ; but by the 10th of August, that is, in three weeks from the time we were able to commence these manipulations, we had so far accomplished our object that we were able to introduce a Thomas's modification of Cutter's pessary with a perineal strap and abdominal belt. The patient's relief was almost immediate : the backache, bearing-down, and dragging pains disappeared, the action of the bowels and bladder became natural ; and she was able to live in the full enjoyment of the marital relation. The patient having been taught to remove and replace the pessary properly herself, and then feeling perfectly well and able to walk to and from my office, a distance of four miles, without any great fatigue, she was discharged on the 17th of August. The pessary was subsequently changed for one of the same variety with a larger bulb, there being a tendency of the tumor to work down behind the instrument ; but it continued to give the greatest relief.

Let it not be supposed that the above happy result can be so readily obtained in every similar case. It is sometimes only after the most long-continued and patient treatment that the hyperesthesia can be removed to such an extent that an instrument can be tolerated.

It will be evident that a fibroid of the size of that described, having an attachment to the posterior wall and the fundus of the uterus, would tend to dislocate the uterus backwards; and even if the organ were replaced, unless some mechanical appliance were adjusted to support this increased weight, or to so far antevert the whole mass that its return into its former dislocated position would be prevented, the relief to the patient would be only the most temporary. What, then, except the adjustment of some artificial support, in the above class of cases, can give any permanent relief to the sufferer? Surgical interference for the removal of the tumor would not be justifiable; for although the sufferings of the patient were great, yet life was not especially endangered, and so grave an operation would be unwarrantable.

I am well aware that a large number of additional cases might be given, illustrating this division of the subject; but those already cited sufficiently prove the great advantage often to be derived from the proper adjustment of some form of mechanical appliance to the uterus; and the practitioner who entirely discards such appliances sacrifices one of the most efficient means of giving relief to very many of his patients.

## II. CASES IN WHICH MECHANICAL APPLIANCES MAY BE DISPENSED WITH.

**CASE I.** Mrs. E., aged thirty-nine, was the mother of four children, the youngest of whom was about twelve years old. I was called to the patient in August, 1873, through the kindness of Dr. J. Marion Sims. She had been twice operated upon by him, once for intra-uterine fibroid tumor,<sup>1</sup> and subsequently for fungoid granulations of the mucous membrane. For several months previous to my seeing the patient her menstruation had been much too frequent in its recurrence, and the time of its continuance was very much prolonged; the amount of blood lost was also in great excess. Each month seemed to increase the difficulty until two months before she was seen, when pregnancy occurring, there was a cessation of the flow. Seven days before she came under my care, she was threatened with abortion, and took her bed; notwithstanding her precaution, two days afterward she aborted with an alarming haemorrhage, which continued in a slight degree at intervals until my first visit.

Upon examination, the body of the uterus was found to be completely retroflexed and considerably enlarged; the external os was found open enough to admit the forefinger; but the internal os was very

<sup>1</sup> See his recent pamphlet on *Intra-Uterine Fibroids*.

small. Feeling confident from the history of the case that, in addition to the probable existence of fungoid granulations, there was the remnant of an ovum there, I introduced two sponge tents, and after seven hours, the patient being etherized and the tents removed, the finger passed into the uterine cavity detected a soft, pulpy mass of about the size of a walnut, attached to the upper and posterior surfaces; also to some extent on the anterior surface were felt the peculiar hypertrophied utricular glands. With a Sims's curette these were all removed, the cavity of the uterus being most thoroughly curetted, until, by the sound conveyed by the curette and by the sensation which it gave to the touch, it was evident that we had reached the firmer sub-mucous and muscular tissue. The operation was accompanied by considerable haemorrhage; but as it was very quickly done, and as the bleeding was readily controlled by putting a tampon into the cavity of the uterus as well as into the vagina, it was not a serious complication. The patient made a good, though rather slow, recovery from the operation. She went over the next menstrual period without any flow, but after that was quite regular and normal. The uterus gradually returned to its perfect position.<sup>1</sup>

Now, had we been satisfied with diagnostinating the malposition of the uterus and adjusting some mechanical appliance thereto, the result could not have been satisfactory, for the remains of the ovum and the granulations still being in the cavity of the uterus, the haemorrhage must continue, even though the uterus were sustained in its normal position; and until this cause of the haemorrhage and the malposition were removed, there could be no hope of permanent benefit. But these causes of the misplacement being obviated, the tendency of the uterus was to regain its perfect position, although it received no aid from any artificial support.

CASE II. Mrs. N., thirty-five years of age, was admitted to the service of my highly respected instructor, Dr. T. Addis Emmet, in the Woman's Hospital of New York, during the month of December, 1873. She had been married twelve years, and had had one miscarriage at six months and subsequently a child, after a rapid labor, ten years before her admission to the hospital. For the latter length of time, although not entirely incapacitated from work, yet she constantly suffered through the lower part of the abdomen and back sharp pains which were greatly increased by walking. She had also a leucorrhœal discharge of a thick and tough consistence.

On examination, the uterus was found retroverted, and its cervix lacerated on the left side down to the vaginal junction and very much hypertrophied, its surface being covered with the discharge above described.

<sup>1</sup> Since the above was written, the patient has been delivered by my respected friend, Dr. J. P. Reynolds.

One week after the patient's admission to the hospital, the writer operated upon the case for Dr. Emmet, for the closure of the lacerated cervix. The patient being etherized, this was successfully done, the haemorrhage, which was considerable, being entirely controlled as soon as the sutures were introduced. She made a good recovery from the operation, and then the uterus being replaced, and some intra-uterine applications of impure carbolic acid made, the womb gradually regained its proper position, and the patient, feeling entirely relieved of her suffering, was discharged from the hospital, cured, January 17, 1874. She was seen four months afterwards, and had continued well. The uterus was then in a normal position, and the cervix looked perfectly natural, no evidences of the operation being visible.

In the above case, the malposition was undoubtedly due primarily to the condition of the cervix, and secondarily to that of the interior of the uterus. The indications were, first, to restore the cervix to its normal condition, or to that which it had previous to the birth of her child ten years earlier; and, second, to obtain a healthy state of the lining membrane of the uterus. The result of this course most certainly proved the correctness of the treatment. Had we attempted to use any mechanical appliance to correct the malposition of the uterus before the natural condition of the cervix had been restored, we should have greatly aggravated the case, for such treatment could not have failed to increase the already greatly irritated cervix. As it was, the beneficial result proved to us that in the above class of cases, at least, mechanical appliances may be entirely dispensed with.

The cases just cited especially show the importance of discovering the cause of the misplacement; for it may be found that after the removal of this cause, any artificial support will be quite unnecessary.

### III. CASES IN WHICH MECHANICAL APPLIANCES ARE POSITIVELY INJURIOUS.

It is very evident that under this class, any case may come in which the appliance is improperly adjusted, however great the misplacement or the urgency of the case may be, demanding such an appliance. In illustration of this fact, let me give the following, which came under my observation at the Woman's Hospital.

**CASE I.** I. M. was admitted to the service of my esteemed instructor, Professor T. G. Thomas, early in the year 1874. She was a single woman, thirty years of age. About five years previous to her admission to the hospital, she suffered from some misplacement of the uterus; the physician attending her, in attempting to adjust an intra-vaginal pessary, introduced it through the urethra into the bladder, where it remained for a year and a half; but it finally caused so much distress from the cystitis which it created, without at all relieving the

misplacement which it was designed to correct, that its removal was contemplated. But before this could be accomplished, it became necessary to cut through the anterior vaginal wall into the bladder, thus forming a vesico-vaginal fistula. Seven months after the pessary was thus removed from the bladder, it was discovered that a calculus had formed there, which was also removed through the same artificial opening. She was then operated upon twice unsuccessfully for the closure of the fistula which had been created. The third attempt for its closure was made by Professor Thomas, which proved successful, and the patient returned home a few weeks afterwards.

By this aggravated case it will be seen how great an amount of damage may be done, and how much suffering caused, by the improper use of a mechanical appliance in this branch of surgery. But let it not be supposed that a less serious result may not sometimes follow the more careful adjustment of a pessary, even where the greatest attention is bestowed as to the proper introduction of the appliance and the most strict injunctions are laid down as to its subsequent use. This will be seen by the following.

CASE II. M. C. presented herself at my clinic in New York during the month of December, 1873. She was twenty years of age, single, and had complained more or less since her arrival in this country, about a year previous. Her principal symptoms were constant pain in the back and down the thighs, and her extremely nervous condition; these, together with her inability to be much on her feet, incapacitated her for her work, which was that of a chamber-girl.

Upon examination the uterus was found to be retroverted, but was very readily replaced in its normal position. The passage of the uterine probe was not followed by any show of blood; neither did it cause the patient the slightest pain. There was no special sensitiveness of the organ, and its malposition seemed due to some sudden and undue abdominal pressure, undoubtedly occurring during her passage on ship-board to this country. The uterus having been put into a normal position, a retroversion pessary of very small size was introduced; and (as was my custom in my out-patient department) the patient was told to walk about a block or two, and returning to remove the pessary herself. This was done to prove, first, that the instrument gave her no discomfort; and, secondly, that after her return home, in case she should have any such discomfort, she might be able at once to remove the pessary. These instructions having been carried out, the pessary was reintroduced, and the patient sent home with the strict injunctions, not only to herself but also to her sister, who accompanied her, to remove it upon the approach of the slightest pain or even discomfort. She was directed to return in one week, that I might be assured that the pessary was accomplishing the desired object, and that she was receiv-

ing no harm from its use. But in five days from the date of its introduction, the sister came back with the following account of the patient's condition: For two days she had almost entire relief from the pain in the back, and would not have known she had any pessary in the vagina, had she not been informed and instructed concerning it. Then commenced some uncomfortableness, which increased to a decided pain; but having found so much relief from the use of the support during the previous two days, she was unwilling to have the pessary removed. The fourth night she had a severe chill, followed by high fever and great pain over the abdomen. Her suffering was then so intense that she permitted her sister to remove the pessary. The fifth day I found the patient with a temperature of 103°, taken in the axilla; the pulse was 112. The girl evidently was suffering from a severe attack of cellulitis of the right broad ligament. She was at once put upon appropriate treatment, and in a little more than three weeks was back in my clinic. The uterus was fixed to the right side, but under treatment it was freed from its attachments so that it could be restored to a normal position.

Here, then, is a case where the introduction of an artificial support to the uterus gave rise to alarming, even dangerous, symptoms. But on account of these occasional accidents, are we to discard pessaries altogether? When we call to mind the number of cases where their use has been found indispensable, and the still greater number where they have been exceedingly beneficial, we certainly feel unwilling to give them up. We rather heed the injunction which requires additional caution for a still more strict discrimination of the classes of cases in which their use may be most beneficial. Even in such instances we should exercise still greater care and watchfulness in the subsequent treatment of the patient. Doubtless we shall continue to use them, and the good results usually obtained will prove the correctness of our judgment.

These examples might be almost indefinitely multiplied, in illustration not only of the topics we have especially treated, but also on other branches of this general subject. To some of the latter allusion has been made in a previous article; others, daily practice is continually bringing to notice. But we trust enough has been said to establish the main points of this paper: that mechanical appliances in certain cases are positively injurious; in others they may be partially or wholly dispensed with; while in a third class they are altogether indispensable.

In this as in many departments of medical practice, the truth, we believe, lies between the extremes of absolute disuse on the one hand and universal application on the other; and the skill of the practitioner is exhibited in discriminating between those cases which are, and those which are not, the proper subjects for such appliances.

RECENT PROGRESS IN ANATOMY.<sup>1</sup>

BY THOMAS DWIGHT, JR., M. D.

## BONE, LIGAMENTS, AND JOINTS.

MR. WAGSTAFFE<sup>2</sup> is the last to write a paper "to show that in all cancellous tissues there is a definite mechanical arrangement, insuring the greatest strength and elasticity along the lines of greatest pressure." He refers to several recent German writers on the subject, but states that his researches were made independently of theirs, and differ from them in many points. To begin with the bodies of the vertebrae, the author states that the upright fibres are not straight, but curved, with the concavity toward the centre of the bone. This is entirely imaginary, as may be seen on sections of the bone, or by consulting the photographs in Bardeleben's admirable monograph on the spinal column,<sup>3</sup> with which the author does not seem to be acquainted. Bardeleben's account of the plates connecting the two ends of the vertebrae is briefly as follows: part run quite vertically, part in a slight curve, so that their end is directly under their origin, and part immediately, or almost so, run obliquely to the lower surface, without ending under their origins. Two or three thin plates often unite into a single thicker one in the middle third of the vertebra to split up again below. The general appearance is of a right-angled net-work, thinner in the middle of the body. The upper end of the humerus is well described. Two series of plates are shown to arise from both the outer and inner side of the upper part of the shaft; the lower set of each side diverges inward, forming Gothic arches with that of the other, while the two upper sets are continued, for the most part vertically, into the greater tuberosity and head respectively. The author shows that the bone must resist pressure in the direction of its long axis when in two quite distinct positions. When the arm is extended, as in pushing, the pressure is transmitted through the head to the glenoid cavity, and when the weight of the body is supported by the arms it goes downward from the coraco-acromial ligament through the greater tuberosity. The lower end of the bone is less thoroughly treated, for nothing is said of the net-work of strong, mostly horizontal braces that occupy the end of the shaft just as it begins to widen. The structure of the innominate bone appears, as Mr. Wagstaffe observes, to have been overlooked, but we are inclined to believe that the reason lies in the difficulty of drawing satisfactory conclusions. Mr. Wagstaffe attaches significance to two sections in particular; the first of these is "from the

<sup>1</sup> Concluded from page 282.<sup>2</sup> The Mechanical Structure of the Cancellous Tissue of Bones. St. Thomas's Hospital Reports. 1875.<sup>3</sup> Vide Report on Anatomy, in the JOURNAL, March 11, 1875.

pubes to the sacro-iliac synchondrosis through the acetabulum and along the brim of the true pelvis." He correctly states that the "thick brim forms part of a ring which is placed almost vertically when the body is erect," and of course gives great support in that position. Additional strength is gained by curved fibres from each side of the body of the pubes crossing one another, but the arrangement behind the acetabulum is not so clear. The second section is through the anterior superior spine of the ilium and the tuberosity of the pubes, and shows curved lines from each surface of the bone, those below the acetabulum forming inverted arches. The remarks on the head of the fibula are interesting as showing, according to the author, that this bone bears a part of the weight of the body. In a well-marked bone a series of diverging curved fibres from the articular surface pass downward into the shaft, and are crossed by a nearly transverse set. If we follow the direction of the force from below upward, it certainly seems plausible that a certain amount of weight should be transmitted through the fibula.

*The Hip.* — Every one who has attentively studied the hip-joint in frozen sections must have been struck by the delicate layer of frozen synovia which nearly or quite surrounds the head of the femur while the preparation is fresh, or by the space intervening between the articular surfaces when it is kept in alcohol; but Professor König<sup>1</sup> has the merit of pointing out its importance. He has made a number of sections with the bones in different positions, and has shown that the brothers Weber were in error in teaching that the radii of the head of the femur and of the socket were equal, as on a transverse vertical section (frontal) the average difference was found to be two millimetres in favor of the latter. The distance between the articular surfaces is by no means the same in all parts of the joint, and varies with the position of the limb. In the erect position the surfaces are in absolute contact, but only through a small space, corresponding with the highest part of the cavity. In abduction and adduction a separating layer of frozen fluid, though at points very thin, was always present.

A year later F. Schmidt<sup>2</sup> advanced quite another view, based on experiment as well as on a mathematical basis that we cannot discuss. The source of difficulty is the complicated form both of the head and of the socket. In the erect position, and in simple extension and flexion, all points of the head and socket are in contact throughout the latter; but in other movements it is not the case. This writer shows that in certain exaggerated movements the head might rest against the edge of the socket and act as a lever. He points out what appears to be a weak point in König's position, namely, that the relations must be different when the head is lying at rest in the socket and when it is forced in by the weight of the body or muscular action.

<sup>1</sup> Deutsche Zeitschrift für Chirurgie, Band iii., heft 3 and 4, November, 1873.

<sup>2</sup> Ibid. Band v., heft 4, November, 1874.

*An Abnormal Canal* in the temporal bone running through the squamous portion, and giving passage to a deep temporal artery arising irregularly inside the skull from the middle meningeal artery, is described by Professor Gruber.<sup>1</sup> He found this anomaly twenty-five times in some four thousand skulls; to wit, six times on both sides, eight times on the right, and eleven on the left. In these cases there is often an extra suture through the squamous portion.

*The Jugular Foramen.* — Professor Rüdinger<sup>2</sup> has published some observations on this point from a work which has not yet appeared, in reply to Professor Moos, of Heidelberg, who has been inclined to trace some connection between dilatation of the bulb of the jugular vein and psychical affections. Out of one hundred human skulls Rüdinger finds that in sixty-nine the right jugular foramen is the larger, the left one in twenty-seven, and that the two are equal in four. These results, except in the last point, correspond very fairly with those obtained by the reporter<sup>3</sup> from a series of one hundred and fifty-nine skulls, of which one hundred and four had this foramen larger on the right, thirty-eight on the left, and seventeen presented no difference. Rüdinger shows that the difference between the two sides depends on the arrangement of the venous sinuses. He holds that there is no true confluence at the internal occipital protuberance, but that the superior longitudinal sinus carrying the blood from the surface of the hemispheres turns to the side of the larger foramen (usually to the right), and that the straight sinus from the interior of the brain turns the other way. He admits, however, that there is a communication between the two. His conclusions are: —

- (1.) That the jugular openings are unequally large and deep.
- (2.) That this difference is not the result of any anomaly of the surrounding bones.
- (3.) That, as above stated, it depends on the course of the circulation.
- (4.) That a broad jugular fossa appears to be an individual peculiarity, in which neither the intra-cranial circulation nor the function of hearing is concerned.

We are unable to see on what the last conclusion is based; as our own observations show that of the one hundred and forty-two skulls which had the foramen larger on one side than on the other, ninety-three, or nearly two thirds, had a more capacious fossa on the same side as the larger foramen, while the fossa was larger on the same side as the smaller foramen in only nineteen, or less than one seventh.

*The Ilio-Tibial Tract of the Fascia Lata* is the name by which Dr.

<sup>1</sup> Virchow's Archiv, 1875, 1 and 2.

<sup>2</sup> Monatschrift für Ohrenheilkunde, 1875, No. 1.

<sup>3</sup> American Journal of the Medical Sciences, October, 1873.

Hermann Welcker<sup>1</sup> designates a part of this fascia which has been variously described, but according to him never understood. In the last edition of Quain, the tensor *vaginæ femoris* is said to be inserted between two laminae of this fascia, and the description goes on as follows: "The outer of these laminae is continued upwards on the muscle in its whole extent, being part of the general investment of the limb; the deeper is connected above with the origin of the *rectus* muscle, and with the fibres attaching the *gluteus minimus* to the hip-joint. The part of the fascia made tense by the action of the muscle forms a strong tendinous band, which descends to the outer and back part of the knee-joint." We reproduce this passage, as it almost coincides with Welcker's description. This band is most commonly known as the *ilio-tibial ligament* of Meyer, who describes it as extending from the crest of the ilium to the outer tuberosity of the tibia, and states that it is joined by fibres from the tendons of the tensor fasciae, and from that of the *gluteus maximus*. Henle denies that any tendinous fibres from the tensor go to form part of this fascia. Welcker's description of the origin of the band differs from that in Quain's *Anatomy*, inasmuch as he gives it three points of origin: one from the layer of fascia covering the tensor, a second from the layer below it, and a third from the inferior anterior spine of the ilium. The author alludes to a forgotten paper read by Maissiat before the *Académie des Sciences* in 1842, in which he maintains that man naturally stands with his weight on one leg, and that the consequent lateral projection of the hip makes tense this fascia, which prevents excessive lateral flexion of the pelvis. Welcker holds that it acts both as a ligament and as a tendon, though not at the same time; as a ligament in the way described by Maissiat, and as a tendon of the tensor, which, when the leg is kept straight, rotates it on the femur. In this connection, Welcker discussed the action of the *sartorius*, and, admitting its usually received action, adds that when the knee is held straight it serves to tighten the fascia of the leg.

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## CONCERNING ACTS COMMITTED BY EPILEPTICS.

BY M. LEGRAND DU SALLE.

*Translated from Annales d'Hygiène Publique et de Médecine Légale, April, 1875.*

BY S. G. WEBBER, M. D.<sup>2</sup>

THE pathological and legal status of epileptics having as yet not been established scientifically and definitively, the most variable judicial

<sup>1</sup> Reichert and Du Bois Reymond's *Archiv*, 1875, i.

<sup>2</sup> It has been necessary to abridge this discourse, especially the reports of cases. It has lost much of its freshness and vigor, but I have tried to retain all that is really essential. — TR.

decisions have been hitherto rendered. It is time that this should cease, and that enlightened opinions should prevail. Epilepsy so changes the natural tendencies, and the intellectual, moral, and affectional character of the patients, that it finally produces in them a general expression, impresses upon them a common stamp. Apart from all convulsive attacks, epileptics are egotists, distrustful, shy, irritable, passionate. A gesture or a look is sufficient to excite their passion. Suspicious, querulous, loving no one, they complain wrongly, quarrel, make themselves hated; in them everything is contradictory. These same men whose bitterness and maliciousness have just awakened your attention, there they are now, polite, flattering, obsequious — they take your hands and put themselves entirely at your disposal. From being gay, animated, self-satisfied, in three or four hours they are sad, desponding, tired of life.

From a medico-legal stand-point there are three varieties of epileptics: (1) those in whom the neurosis has had no effect on their intelligence; (2) those whose intelligence and memory are only temporarily disturbed at the time of or after their attacks, and who during long intervals of quiet enjoy complete possession of their reason, though I consider them, really, as candidates for insanity; (3) those whose minds are seriously and permanently changed, whose insanity is irremediable. To this division corresponds necessarily a scale of legal responsibility.

1. A crime coolly calculated, with sufficient explanation of the motives, especially if the epileptic attacks are rare, and if they have never compromised the intelligence, renders the author responsible.

2. Whoever has clearly committed a crime when not subject to an attack is partially responsible, according to his mental capacity.

3. An unjustifiable crime committed under the evident influence of an epileptic attack involves absolutely no responsibility.

In examining an epileptic, the medico-legalist should proceed exactly as if he had before him a case of mental disease, and form his judgment from the whole assemblage of symptoms, and not from a single one. He will lay stress upon the character and the course of the attacks of delirium in their relations with the physical symptoms of epilepsy. Thus he will inquire whether the delirium occurs in the form of crises, without convulsions, without incomplete attacks, and without vertigo, or whether in direct connection with these physical symptoms; whether these crises have been relatively short; whether they have had a rapid invasion and cessation; finally, whether they have recurred at intervals more or less distant during the previous life of the patient or in the prison. Secondly, he will found his opinion upon the physical and moral character of the crises, which consist chiefly in vagueness and obtuseness of the ideas, the occurrence of violent and instantaneous impulses, the necessity of walking without an object, of striking and breaking

without motive, and extreme confusion of memory after the disappearance of the delirium. Finally, he will rely upon the character of the acts themselves committed during these attacks; they are violent, automatic, instantaneous, and without motive.

All medico-legal difficulty is summed up in a simple question of diagnosis. Rousseau often repeated these words: "Epilepsy is the disease which is most often overlooked." Every day I recognize the correctness of that opinion. Among the crowd of criminals and abandoned of all classes whom I meet at the police court, I have been surprised often at finding the same persons, and learning that they were prosecuted for the same offense. I have many times found in their feelings of discomfort, their giddiness, their migraine, their fainting spells, their nocturnal incontinence of urine, their rush of blood, their momentary loss of reason, or their loss of memory, the sure signs of epileptic vertigo, of the *petit mal* or the *grand mal*. Of all the epileptic phenomena, vertigo is the most frequently ignored. Although it may be almost instantaneous, it leads quite as quickly as the classical attacks to abnormal psychical manifestations.

A woman, P., thirty years old, stole a pair of shoes at a stall, without any motive for the act, while the shopkeeper was near and saw her. Arrested, she returned the shoes, protested the purity of her life, and said she had no recollection of the theft. It was a case of epileptic vertigo.

The symptom of epilepsy which is next in frequency overlooked is the nocturnal incontinence of urine at intervals more or less distant. The symptomatic value of this is very great. A Mr. G., who had borne a reputation for good behavior and sobriety, was sometimes unquiet, anxious, preoccupied; but he soon recovered his cheerfulness. One day he left his place of business, went to his sister's, talked with her a short time, then without provocation struck her sixty-three blows with a chopping-knife. When he was taken to the Bicêtre, it was learned that he had wet his bed several times a year when he was in military service, that at times he had trouble in his head. He continued to have nocturnal attacks, wetting his bed. He died after an attack of acute maniacal delirium.

A class of persons at intervals show suddenly anomalies of intellect of very short duration, singularities of character, violence in speech, with or without hallucinations of vision, sometimes with a true aura, but invariably with absolute loss of memory for all that happens during the attack. These seizures have the same character each time for the same persons. Frequently the patient is impelled to walk off without any definite purpose, and on recovering finds himself at a distance from home, with no knowledge of what he has done.

The diagnosis of masked epilepsy is very difficult; the symptomatol-

ogy is imperfect; only the intellectual side of the terrible neurosis is seen; the vertigo, the incomplete attack, and the convulsive grand mal are wanting. Thus, a lady of distinction suddenly, at almost regular intervals, utters the most injurious, the most cynical, and the vilest words during one or two minutes, in a salon, at table, at church, or at the theatre. In place of the words, suppose an assassination. This lady has no recollection of what she says.

A very intelligent young man, in the higher class of society, three or four times a year has a peculiar sensation in his stomach, always identical; he immediately loses consciousness. On coming to himself he finds that he is far from home, fatigued, in a railroad car, or in prison, his pockets containing jewelry, handkerchiefs, pocket-books, cigar-cases, knives, money. He remembers nothing of what has happened.

In masked epilepsy the misdemeanor and crime have a character entirely unexpected, and display the strong contrast between the natural disposition of the person and the scandalous and mad acts which are committed during the temporary disturbance of consciousness. There are two men to study, two psychological states to compare, and two series of actions; but never lose from view that in masked epilepsy what a patient has done during one of his attacks he will invariably do again in the same circumstances. Masked epilepsy does not run through all degrees of eccentricity or crime; it is limited entirely to a single one.

In examining a crime for which no motive can be found, legal medicine may meet the most exceptional difficulties. Before hastily concluding that epilepsy is present it is necessary to recognize the whole group of symptoms just passed in review. If one important sign is entirely wanting, take care lest you may be following a false scent.

The most extraordinary and embarrassing case for a long time is that of T., the assassin of Rue Cujas. This man was born January 15, 1851, at the Saint Lazare prison, of a child-mother who was not yet fifteen years old, and of a father sixty-three years old. He says that since 1865 he has had three or four fainting fits, with entire loss of consciousness, and several times vertigo. He is intelligent, has a good memory, answers questions correctly and frankly, and gives information about himself, foreign to the crime, but showing a precocious and sadly audacious perversity. He says he has had at irregular intervals an itching to kill some one. These crises last from one to three days, and during this time he feels nervous, irritable, unable to keep still, and always ready to commit some violent act. During one of these attacks he spent the night with a *fille publique*. He thought of killing her, but was restrained by the idea that his crime would be attributed to a desire to rob, and he did not wish to be taken for an infamous assassin of one with whom he had passed the night. He finally killed a young woman

who waited upon him at the restaurant. He has been calm for five months and a half since his arrest, and no one has noticed the least sign of delirium or epilepsy. I was inclined, however, to consider it as a case of masked epilepsy, yet T. had complete preservation and precision of memory after his fainting fits and his vertigo. Now this fact, almost of itself alone, excludes epilepsy. M. Lasegne considers that the assassin of the Rue Cujas had paroxysms of impulsive insanity, that he may have had epileptiform symptoms, but he was not an epileptic. This seems reasonable, but I am not yet able to give an absolutely definitive diagnosis.

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#### THE MORAL OF THE MICHIGAN DIFFICULTY.

THE disturbance caused by the "inflation policy" of the legislature of Michigan in forcing a so-called homeopathic department into the regular school has reached the "correspondence" stage, so that we may hope the end is at hand. The only advantage to be hoped for from the letters is that the profession may be stirred up to take a firm position in the matter. Nothing is to be gained by temporizing; if the faculty does not appreciate that no compromise with quackery is possible, they will find out their error when it may be too late to repair it. If the medical department is thought worth preserving, a vigorous effort must be made. We appreciate that the position is a hard one. An ignorant legislature and public press have natural affinities with quackery, and the respectable man is always at a disadvantage in a dispute with an unscrupulous impostor; nevertheless the fight must be fought.

This affair, let it end as it may, is of great importance, as it points a moral that the profession at large should profit by. Some years ago a ring endeavored, happily without success, to establish a national university under government control, and we occasionally hear suggestions of State boards to confer licenses to practice. Let it be understood once and for all that professional honor is too precious to be made one of the prizes of political contests. The theory as well as the practical working of our political system forbids us to consider government as a kind parent in whom we may trust; on the contrary, it can be kept pure only by the strongest and most persistent efforts, and a moment's inattention may give the intriguer years of advantage.

A legislature may be respectable one year, and the reverse the next; or if not the next, yet surely sooner or later: and it would be as futile as unbecoming for us to pit ourselves against the quack in lobbying and bribery. Professional affairs are safe only in our own hands; let us keep them there.

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#### THE BRITISH MEDICAL ASSOCIATION.

THE forty-third annual meeting of this association was opened at Edinburgh on Tuesday, August 3d, and continued four days. Sir Robert Christison occupied the presidential chair and delivered the opening address, which was

devoted to the subject of medical education and medical examinations in Great Britain. The question was discussed at length, and occupied over two hours in delivery. On following days addresses were delivered before the general meeting by Dr. Begbie on medicine, by Mr. Spence on surgery, and by Dr. Rutherford on physiology. The most interesting portion of Mr. Spence's address was that which treated of wounds and surgical dressings. This was listened to with great interest as coming from a prominent member of the surgical staff of the Edinburgh Infirmary and a colleague of Professor Lister, differing from the latter strongly in his views on the antiseptic treatment. The speaker adduced a number of facts showing that other methods of treatment might also give brilliant results. Professor Lister, of course, had an opportunity to present his view of the question, which he illustrated before the physiological section by an interesting series of clinical demonstrations and by an able lecture on the process of infection. His efforts contributed in a high degree to the success of the meeting. Dr. Rutherford, the successor to Hughes Bennett, devoted himself chiefly to a report of a number of experiments on the biliary secretion of the dog, and defended also with great spirit experimentation on animals, wherein he was strongly supported by Dr. Burden Saunderson and Sir Robert Christison.

The business of the meeting did not run so smoothly this year as it has been wont to do in times past. Great indignation was exhibited against the council for securing the adoption of its report without discussion, as well as the remodeled by-laws of the association. Considerable excitement was also produced by the appearance of two lady-members one of whom, Mrs. Garret Anderson, read before one of the sections a paper, which is said to have been very favorably received. The constitutionality of the action of the county society in admitting lady-members was discussed with much animation, and the motion was finally carried "that it be an instruction to the secretary, between now and the next annual meeting, to issue a circular addressed to every member of the association, requesting an opinion 'yes' or 'no' as to the admission of female practitioners to membership."

In the section on surgery the question of anæsthetic agents came up for discussion, and a committee was "appointed to inquire into and report upon the use in surgery of various anæsthetic agents and the mixture of such agents." We notice upon the committee the names of Lister, Keith, Spencer Wells, Clover, Macdonnell, and Morgan, and shall therefore look forward with strong hopes for a satisfactory report at the next annual meeting. The details of the section work have not yet been fully reported. It was voted after some discussion to meet next year at Brighton, and that the president elect should be Sir John Cordy Burrows. The annual dinner was attended by but five hundred members — quite a small number when the size of the association is considered. The annual museum, the conversazione, the garden party, and excursions were interesting features of the meeting.

## DENTISTRY IN 1796.

AMERICAN dentists of the present day may with justice lay claim to a high reputation for skill and ingenuity. The autograph letter of Washington which appeared in the JOURNAL of June 17th showed that considerable enterprise was shown also by our dental forefathers. We have before us an interesting document which gives quite accurately the degree of proficiency which had been reached in dentistry toward the close of the last century. It consists of an advertisement issued by one Josiah Flagg, surgeon dentist, who

"Informs the public, that he practises in all the branches with improvements, [i. e.] Transplants both live and dead Teeth with great conveniency, and gives less pain than heretofore practised in Europe or America: . . . Sews up Hare Lips: . . . Cures Ulcers: . . . Extracts Teeth and stumps, or roots with Ease: . . . Reinstates Teeth and gums, that are much depreciated by nature, carelessness, acids, or corroding medicine; . . . Fastens those Teeth that are loose (unless wasted at the roots); regulates Teeth from their first cutting to prevent fevers and pain in children; assists nature in the extension of the jaws, for the beautiful arrangement of the second Sett, and preserves them in their natural whiteness entirely free from all scorbutic complaints. And when thus put in order and his directions followed (which are simple) he engages that the further care of a *Dentist* will be wholly unnecessary; . . . Eases pain in Teeth without drawing; . . . Stops bleeding in the gums, jaws, or arteries; . . . Lines and plumbs Teeth with virgin Gold, Foil, or Leads; . . . Fixes *gold Roofs* and *Palates*, and artificial Teeth of any quality, without injury to and independent of the natural ones, greatly assisting the pronunciation and the swallow when injured by natural or other defects. A room for the practice with every accommodation at his house, where may be had Dentifrices, Tinctures, Teeth and Gum Brushes, Mastics, &c., warranted approved and adapted to the various ages and circumstances; . . . also Chew-sticks, particularly useful in cleansing the fore Teeth and preserving a natural and beautiful whiteness; which Medicine and Chew-sticks are to be sold wholesale and retail, that they may be more extensively usefull.

"\*\* Dr. Flagg has a method to furnish those Ladies and gentlemen or children with Artificial Teeth, Gold Gums, Roofs, or Palates, that are at a distance and cannot attend him personally.

## Cash Given

for Handsome and Healthy Live Teeth

at No. 47, Newbury-Street, Boston (1796)."

The document is ornamented in one corner by very formidable and antiquated instruments, while in the other are to be seen tooth-brushes quite of the modern pattern. It has been preserved by a descendant of one who, as may be seen on the back, purchased a bru-h and tincture from Josiah Flagg in the year 1800.

## MEDICAL NOTES.

— The death of Dr. Ira Allen, of Roxbury, has removed from the community a man widely known and respected for his worth and abilities. He entered the profession late in life, but his ready skill, his intuitive judgment, and his gentleness towards the suffering had secured for him a large field of practice and endeared him to the inmates of numerous homes. In his intercourse with his medical brethren he was courteous and considerate; and he contributed several useful and practical appliances in surgery. He rose in his earlier career in the face of unusual obstacles, winning success by virtue of his indomitable perseverance and energy. His medical degree was taken at Dartmouth.

Besides attending faithfully to the demands of an extensive practice, Dr. Allen found time to serve the city of Roxbury, and more recently the city of Boston, in various responsible offices, wherein he showed exceptional fidelity and ability. As city physician of Roxbury, as coroner, as agent of the Board of Overseers of the Poor, as associate justice of the Municipal Court in the Highland district, and especially as a member of the school committee, a position which he held for twenty-three years, he displayed efficiency and public spirit and acquitted himself with credit and honor. Our readers will remember how well, as coroner, he conducted the preliminary examination of the boy Pomeroy after the Millen murder. In all his relations, public and professional, Dr. Allen will be greatly missed in his community, for in no sense was he a neutral man; he had strong convictions and these he maintained boldly and manfully, but with a forbearance which made for him a host of friends.

— There are several English ladies attending the lectures of the École de Médecine of Paris at present. We see that among others Miss Alice Vickery, chemist by examination of the Pharmaceutical Society of Great Britain, has just passed her deuxième examen de fin d'année, and with the certificate "bien satisfait" from the examiners. The *Medical Press and Circular* says that it remains to be seen whether some hospital in London will now be generous enough to grant such industrious ladies the necessary clinical instruction in medicine and surgery required by the École de Médecine of Paris.

— The application of an elastic ligature for securing the funis is recommended by George Bayles, M. D., in the *Medical Record* of August 28, 1875. Dr. Bayles uses a small, elastic rubber ring, of a size that would be somewhat stretched by being drawn over the point of the fourth finger of his hand. In applying the ring he doubles the umbilical cord upon itself, so that three inches are taken up in the loop, as close to the umbilicus as possible. He then springs the ring over the loop, and rolls it down to within half an inch of the abdominal surface, and cuts the funis about half an inch from the rubber ring, external to the loop. Two portions of the funis are in this way constricted by the ring. The ring may be doubled upon itself before applying it, if there is any doubt as to its sufficient constricting force.

— We learn from the *Albany Weekly Times* that the trustees of the Johns Hopkins bequest of Baltimore are carefully carrying out the wishes of the donor. They have purchased twenty-four acres of land for the purposes of the

Colored Orphan Asylum. The erection of the buildings will be commenced within the next two years. The orphan asylum will be about three miles distant from the hospital, which is to be located in the eastern section of the city. The university, which is to be erected on the Clifton estate, as well as the other great objects of Mr. Hopkins's bounty, engage the most careful consideration of the trustees. President Gilman is now in Europe, gathering information to be of use in the establishment and development of the great school. He has been through England, Scotland, and Ireland, and is now on the Continent, conversing and corresponding with the learned and examining the systems of education of the Old World. He will return this fall and pursue his further labors here preparatory to the opening.

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## MASSACHUSETTS GENERAL HOSPITAL.

### LARYNGOSCOPIC CLINIC.

BY F. I. KNIGHT, M. D.

*Large Pediculated Cyst of the Epiglottis; Accidental Rupture. No Refilling after Five Months.*—J. B., forty years old, a varnisher by trade, presented himself at the clinic March 10th, complaining of difficulty of breathing when lying on his back, and of some difficulty in deglutition, both of which symptoms he had experienced for six months.

On laryngoscopic examination a tumor of about the size and shape of a large almond (in the shell) was seen lying on the glossal surface of the epiglottis. It was of the color of the mucous membrane of the glossal surface of the epiglottis (yellowish), was soft and fluctuating to the touch with the sound or finger, and was traversed by beautifully injected blood-vessels. On being dislodged with the sound it fell down into the larynx, disclosing a very long, slim, grayish pedicle, which seemed to be attached near the median glosso-epiglottic ligament. Swallowing water also dislodged the cyst from the glossal surface of the epiglottis, and caused it to slip down into the larynx, the pedicle being seen twisted around under the edge of the epiglottis. The cause of the dyspnea being more marked on lying down was evidently the fact that when the cyst was out of the larynx, and the patient reclining, it depressed the epiglottis.

I passed a wire with Voltolini's instrument around the pedicle in order to burn through it by galvano-cautery. Unfortunately, while the wire was being drawn up, before being connected with the battery, it broke, and was removed with some little difficulty. The patient, being very timid, begged off for the day, promising to return the second day after. As he did not appear on that day he was visited at his home by an assistant, who found that he had been suddenly relieved of the symptoms on the night of the attempted operation, and an examination proved that the cyst had been ruptured on account of the manipulation to which it had been subjected. The assistant, who, however, had not then had very much practice with the laryngoscope, could see nothing left of it. The patient's wife has recently told me (September 1st) that he has

never had a symptom of throat trouble since. He has promised to show himself at the clinic, but up to this time has failed to do so.

It is worthy of mention that this patient had also a small pediculated cyst on one side of the uvula. It was of about the size of a hemp-seed, gray in color, and semi-transparent.

Small retention-cysts of the larynx are not so very uncommon, but cysts of such size as this one are very rare.

One of the first cases examined laryngoscopically was that of Mr. Durham, at Guy's Hospital. The patient was a boy eleven years of age. For three years he had had dysphonia, dysphagia, and dyspnoea. The laryngoscope showed a large, round, tense tumor projecting backwards and downwards, and covering the glottis. The aryepiglottic folds were oedematous.

Gibb reports a case in which the swelling completely occupied the glottis, and proved to be a cystic growth, developed within a protrusion of the mucous membrane from the ventricle.

Bruns had one case in which a cyst about three tenths of an inch in diameter projected from the right ventricle.

Mackenzie had one of large size, and apparently on both the upper and under surfaces of the epiglottis.

Johnson had a large one attached near the anterior angle of the cords.

Rauchfuss reports one in the glosso-epiglottic fossa, of the size of a hazelnut.

Cohen reports one in the same situation, but does not state the size.

Schrötter's first case was a tolerably large one, I believe, but none of the later were larger than a cherry-stone.

The largest laryngoscopic cyst I have ever seen occurred in the practice of Dr. Langmaid, of this city. It was considerably larger than in the case I have reported, and was grayish in color, and semi-transparent. It was apparently attached in the glosso-epiglottic space.

Wagner<sup>1</sup> reports a little cyst on the posterior surface of the soft palate.

Cysts of the larynx are almost always retention-cysts, and one would suppose that they would refill after evacuation, but this has not usually been the case, although not by any means all of them have been laid open freely, and cauterized, as has been recommended.

In Bruns's case a simple incision was made, and there was no recurrence six months after.

Mackenzie's case was incised, evacuated, and cauterized, and at the end of a month not even a scar was visible.

In Rauchfuss's case the cyst was probably accidentally ruptured by taking hold of it with Bruns's epiglottic pincette (which instrument, by the way, I used in drawing my cyst into the wire loop). At a later visit an empty fold of mucous membrane was seen in place of the cyst, and no mention is made of recurrence.

In the cases of Gibb and Johnson, and in two of Schrötter's cases, the cysts were extirpated, Schrötter meeting with the same misfortune in breaking the wire loop, in one instance, as I did.

<sup>1</sup> Ziemssen's Handbuch der Speciellen Pathologie und Therapie.

## LETTER FROM ENGLAND.

**MESSRS. EDITORS.**—Several months ago a German friend, after spending some time in looking over our institutions and studying our customs, said to me that he observed in America a tendency to despotism. He was especially surprised at the great powers given to our boards of health; but if he should visit the large cities of England he would find that other people are even more "despotic" than we are, in summarily stopping one man from pursuing his own selfish interests at the expense of his neighbor's health or even comfort, and in protecting man also from the evil results of his own dirt and ignorance.

In England, however, as with us, the sanitary laws are as yet only permissive, and we find them carried out in all degrees of efficiency, just in proportion as the health officers are assisted, let alone, or even thwarted in their efforts by the different local authorities. To spend a few weeks studying such cities as Liverpool, for instance, would be in itself almost a sanitary education. To be sure, their need was great. With a population of five hundred and sixteen thousand crowded on five thousand two hundred and ten acres,—a density just about double that of inner London,—and with a tough, clayey soil that does not readily purify itself of its filth, their death-rate became alarmingly high, and not only the dregs collected in the alleys from all the cities of the world, but their more fortunate neighbors, suffered the penalty, a death penalty in this case.

The health department of Liverpool is now, however, one of the best in the world. Thousands of "rookeries" have been torn down to let light and air in and keep the doctor out (as has been done also on a large scale in Edinburgh, Glasgow, Manchester, and Birmingham). Not even a new sewer can be built or an old one reconstructed until the plans have been examined and approved by the health committee, and I actually stood in the door-way of one of their slaughter-houses without suspecting where I was. An abattoir has already been built, and all private slaughter-houses will probably be closed at some time in the future, as has already been done in Glasgow, Edinburgh, Manchester, and many of the Continental cities. The disinfecting department for contagious diseases, the scavenging arrangements, and the large swimming-baths in the heart of the city and of pure, clean water (not opposite the mouths of the sewers in the rivers) can be seen only to be admired.

The sewage of Liverpool is discharged into the Mersey, and without any ill effect that is apparent, as none of the material is allowed to accumulate in the docks, and a commission of engineers has decided that it has not obstructed the channel in the least. Their sewage-farm was a failure some years ago, when the elements of success were not known, and consequently was given up; but they are now trembling under the probability of an injunction, which will compel them to do something. The outlying parishes have already been enjoined not to discharge any sewage into the river, and within an hour's ride of the Adelphi may be seen an irrigation farm combining all the good points known at the present time. The original cost of such farms, if so constructed as to thor-

oughly satisfy the sanitary authorities, is great, and the yearly income is generally only a little more than the actual outlay for that year. It is thought, however, that they can be made at least self-sustaining when a greater variety of crops can be raised. The Craigentinny meadows, near Edinburgh, pay very handsomely. Irrigation has been practiced there for more than a century, and three other smaller irrigation farms have been laid out since the first experiment proved so successful, so that there is now one at each point of the compass from the city. All of these four farms are flooded with much more sewage than the vegetation can purify; there is a more or less disagreeable odor in their vicinity most of the time, and the effluent water is often quite offensive, especially where it runs slowly down the beach at low tide, to the annoyance and disgust of the bathers. No injurious effect has been observed on the health of the community from these sewage-farms, although they are naturally looked upon with some suspicion by the health-officers. In fact, the troops in the barracks close by enjoy remarkably good health, and when the cholera prevailed in Edinburgh some years ago, not a single case occurred near the Craigentinny meadows. Only Italian rye grass is raised, a crop requiring very little care, and nearly all the milk and butter supplied by dairy-men to the city come from cows fed on it. The cows thrive on their food, but an occasional sensitive visitor to Edinburgh abstains from milk and butter while in the city. About half the sewage is discharged at deep water by an intercepting sewer running along the Leith River; at least one half of the rest runs over the beach from the Craigentinny meadows into the harbor. This experiment, therefore, although a success pecuniarily to the private owners, is very unsatisfactory in other respects.

The one hundred and fifty towns in England that have adopted any of the various plans of getting rid of their sewage, without discharging it into the streams, have done so almost if not quite without exception, because forced to it by injunctions; and their success in accomplishing their objects has been more or less complete, as far as satisfying the sanitary authorities is concerned. Thus far not one has been decidedly remunerative, although that is a point which has not been and should not be considered. The precipitating processes have all been decided failures, besides being local nuisances themselves; from some of them the stench is simply sickening. Still it is evident that the removal of only the solid matter from the sewage will improve the condition of the streams very decidedly. Practically, it is found that about seven tenths of the soluble offensive matter goes off with the effluent water, from which there is more or less precipitate in the course of time.

It is apparent from the efforts made all over the kingdom that some decided action is expected from the next parliament. In this city (Birmingham) alone, at the present time, five different methods are in use, and all over the country experiments are making to solve the troublesome questions, first, how to keep the streams pure, and secondly, how to do so with the least burden to the tax-payers. Leeds, after repeated failures, has returned to the old A B C process, which is essentially what Moses directed the Israelites to use; but the effluent water is to be used for irrigating a luxuriant growth of osiers. In Manchester ash-closets are largely used, with the hope that by keeping

human excrement out of the sewers the street-washings and slop-water may be discharged into the river without creating a nuisance, a mistake from which a knowledge of the experience of Baltimore might have saved the authorities. In this city there is an excellent system of sewerage, the sewage is kept out of the streams, the smoke-nuisance act is enforced, and the death-rate is low.

Having a few hours to spare, a few days ago, while waiting for my train, I made an unannounced visit to the West Riding Lunatic Asylum, from which we have seen so many excellent papers in the medical journals, and whose yearly reports are so interesting and valuable to us. I was fortunate enough to find Dr. Browne at home, and was received with that cordial hospitality which I find so freely extended here to strangers who seek information. I have not seen an asylum, and I doubt whether there is one, where the modern treatment of mental disease is so well carried out in all respects as there. The directors pay a large salary so as to secure talent of the first order, and then leave the management of the asylum in all its details to their medical officers. The newer parts of the building were constructed with wooden sashes, and no iron guards of any kind were used. In some of the wards the panes of glass were so large that a patient might easily get out by breaking the glass, if no one were at hand to prevent it. Dr. Browne said that if he were now to construct the whole asylum anew, he should have all the windows made in this way. Even the "refractory" wards had open fire-places, porcelain vases on the mantelpieces, prettily decorated walls, and nice furniture.

Of the fourteen hundred patients, not one was undergoing mechanical restraint in any form, and not one was in seclusion.

Dr. Browne does not even use clothes of indestructible material for his violent and "tearing" patients, preferring to have an attendant close at hand until the destructive tendency has given way under medical treatment and occupation. There were no airing-courts in the old sense of the word, that is, bare yards with high walls; but every patient who went out to walk did so in pleasant, tastefully decorated yards. I could not but admire the skill and ingenuity with which the older parts of the asylum had been made cheerful, light, and airy. At the end of one rather dark ward, a pleasant light from several gas burners shone through a beautiful, stained-glass window during the day. One great secret of the quiet and order which prevailed was, I think, the fact that all the patients are kept employed as far as possible. Even the carpets, shoes, bedding cloth, clothes, etc., used in the place were made by the patients. I found some old, demented men darning stockings. Some of them were even blacksmiths. About one fourth are taught to work at their several occupations in the asylum.

Of course, Dr. Browne has a large staff of competent attendants, one to every eight patients; these attendants are carefully selected in the first place, and all unfitted for the work are unsparingly weeded out. The suicidal patients are watched day and night, and cannot even go to the water-closet without an attendant. We all know what good pathological work is done at this asylum; I need not describe that department. As an illustration of the care which is used to keep the patients from disagreeable sights, I noticed that the

two dead-rooms (one for males and one for females) had been so placed that the hearse, coming or going, could not possibly be seen. Many little things like that all over the asylum showed how fully the old theory had been abandoned, that the insane are indifferent to their surroundings. In fact, a great deal was expected in the way of treatment from making them as comfortable and happy as possible. A few minutes' walk from the wards a pretty Gothic church stands out among the trees, to which the patients go with a feeling of self-respect; and there is nothing in it or about it which makes it look different from a church for sane people.

I have not space to describe the department for experiment, and medical and pathological research, including the vivisection-room; I am sorry to pass over the strictly medical treatment with simply a mention of their Turkish baths and vapor baths (a very important feature), and to say that only a very few patients, comparatively, were taking medicine (not more than five per cent. taking morphia in any form).

I was very much struck with the good behavior of the patients, and with the absence of noise and violence. I suspect that the whole treatment which has been so successful may be described in Dr. Browne's remark to me: "Treat them as men and women, and they will behave as such." I placed the aphorism alongside of my Scotch friend's reply to my inquiry what his treatment was that made his patients so quiet, for I saw many open doors, large wooden window-sashes, no mechanical restraint, and very few prescriptions in the medicine-book. That reply was, "I believe in a good cook and a big garden."

Verily, better days have come for the insane, and, taking all things into consideration, I think that, as in sanitary matters, America stands next to Great Britain, *proximus sed magno intervallo interjecto*.

It seems to be generally believed in our country that insanity is of a milder type here, and that the insane are more easily managed. Of course I cannot say that such is not the case. I can only say that it does not seem to me to be true, and that I am supported in my opinion by careful and competent observers. But the English and Scotch have a great advantage over us in a climate which makes it possible to send their patients out-of-doors to walk or to work nearly every day throughout the year.

F.

BIRMINGHAM, ENGLAND, August 15, 1875.

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#### WEEKLY BULLETIN OF PREVALENT DISEASES.

THE following is a bulletin of the diseases prevalent in Massachusetts during the week ending September 4, 1875, compiled under the authority of the State Board of Health from the returns of physicians representing all sections of the State:—

The noteworthy feature of this week's reports is the increase in the prevalence of typhoid fever in the rural sections; the type of the disease is mild. In other respects the returns do not vary essentially from those of the previous week, the diarrhoeal disorders maintaining the highest place in the list,

but declining somewhat with the approach of cooler weather. The report for each section is as follows:—

Berkshire: Diarrhoea, cholera morbus, cholera infantum, dysentery.

Valley: Diarrhoea, cholera infantum, cholera morbus, dysentery, typhoid fever.

Midland: Diarrhoea, cholera infantum, dysentery, cholera morbus, typhoid fever.

Northeastern: Cholera infantum, diarrhoea, cholera morbus, dysentery, typhoid fever. An increase of sickness. Woburn reports scarlatina and typhoid fever quite prevalent and severe.

Metropolitan: Cholera infantum, diarrhoea, cholera morbus, dysentery, typhoid fever.

Southeastern: Diarrhoea, cholera infantum, cholera morbus, dysentery, typhoid fever. Nantucket reports a fatal case of cerebro-spinal meningitis, and Hyannis a case not fatal.

F. W. DRAPER, M. D., Registrar.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING AUGUST 28, 1875.

	Estimated Population.	Total Mortality for the Week.	Annual Death-rate per 1000 during Week.
New York . . . . .	1,060,000	572	28
Philadelphia . . . . .	800,000	360	23
Brooklyn . . . . .	500,000		
Boston . . . . .	350,000	200	29
Cincinnati . . . . .	260,000	98	20
Providence . . . . .	100,700	45	23
Worcester . . . . .	50,000	31	32
Lowell . . . . .	50,000	31	32
Cambridge . . . . .	50,000	24	25
Fall River . . . . .	45,000	38	44
Lawrence . . . . .	35,000	19	28
Springfield . . . . .	33,000	12	19
Lynn . . . . .	33,000	18	28
Salem . . . . .	26,000	17	34

THE semi-annual meeting of the New Hampshire Medical Society will be held at the Fabyan House, in the White Mountains, on September 20th and 21st. Invitations have been extended to the Boston Society for Medical Improvement, the North Essex, and White Mountain Medical Societies. Excellent arrangements appear to have been made with the railroads, and various excursions can be easily and cheaply made. Tickets to be bought for Concord and return.

BOOKS AND PAMPHLETS RECEIVED.—Medical Education. Address delivered before the Rhode Island Medical Society, June 16, 1875. By Edward T. Caswell, A. M., M. D. Providence. 1875.